

## CLAIMS:

1           1. (Currently Amended) A valve assembly adapted to be positioned into a urethra in a  
2 mammal, including humans, the valve assembly comprising:

3           a) a valve holder comprising a substantially cylindrically shaped body to be inserted into  
4 the urethra, and

5           b) a valve housing comprising a valve controlling an urine flow from a patients bladder,  
6 the valve assembly ~~being arranged~~ adapted to be arranged in a sealed manner between the walls  
7 of the urethra,

8           wherein the cylindrical valve holder comprises a shape memory alloy to provide an  
9 expandable element ~~having the possibility~~ adapted to expand after the insertion of said valve  
10 holder to increase its diameter at its upper end to provide a frustoconical portion, whereby the  
11 increase of the diameter of the cylinder at its upper end is more than 15% and whereby the  
12 increase of the diameter of said cylindrical valve holder is temperature dependent; and

13           wherein the valve holder comprises at least two frustoconically shaped portions at one  
14 end of the cylinder corresponding to said frustoconical portion.

1           2. (Previously Presented) A valve assembly according to claim 1, wherein the  
2 cylindrical valve holder increase its diameter at its lower end.

1           3. (Cancelled)

1           4. (Cancelled)

1           5. (Currently Amended) A valve assembly according to claim 1, wherein the valve  
2 holder comprises said at least two frustoconically shaped portions at one end of the cylinder as

3 well as at least one frustoconically shaped portion at the opposite end thereof, both of which  
4 correspond to said frustoconical portion.

1 6. (Previously Presented) A valve holder according to claim 1, wherein the holder and  
2 the housing are detachable from each other when in place in the urethra.

1 7. (Previously Presented) A valve assembly according to claim 1, wherein the holder  
2 and the housing are detachable from each other.

1 8. (Currently Amended) A valve assembly according to claim [[1]] 5, wherein the valve  
2 holder includes a first portion ~~exhibiting a frustoconical shape~~ corresponding to said at least two  
3 frustoconically shaped portions at one end of the cylinder, a second portion being essentially  
4 cylindrical and a third portion ~~exhibiting a frustoconical shape~~ corresponding to said at least one  
5 frustoconically shaped portion at the opposite end and directed in opposite direction in relation to  
6 the first portion.

1 9. (Cancelled)

1 10. (Previously Presented) A valve assembly according to claim 1, wherein the holder is  
2 helix shaped wire arranged onto the valve housing.

1 11. (Previously Presented) A valve assembly according to claim 1, wherein the holder  
2 comprises a helix shaped wire threaded on external threads arranged on the outside of the valve  
3 housing.

1 12. (Previously Presented) A valve assembly according to claim 11, wherein the  
2 increase of the diameter of a helix shaped wire at its upper end is more than 15 %.

1           13. (Previously Presented) A valve assembly according to claim 11, wherein the  
2 increase of the diameter of the cylinder at its upper end is at least 40 %.

1           14. (Previously Presented) A valve assembly according to claim 12, wherein the  
2 increase of the diameter of a helix shaped wire at its upper end is at least 40 %.

1           15. (Previously Presented) A valve assembly according to claim 12, wherein the  
2 increase of the diameter of a helix shaped wire at its upper end after expansion is at least 25 %.

1           16. (Previously Presented) A valve assembly according to claim 12, wherein the  
2 increase of the diameter of a helix shaped wire at its lower end is at least 10 %.

1           17. (Previously Presented) A valve assembly according to claim 12, wherein the  
2 increase of the diameter of a helix shaped wire at its lower end after expansion is at least 20 %.

1           18. (Previously Presented) A valve assembly according to claim 1, wherein the increase  
2 of the diameter of the cylindrical portion of the valve holder is less than 80 %.

1           19. (Previously Presented) A valve assembly according to claim 1, wherein said valve  
2 holder comprise an expandable element having the possibility to shrink upon removal of said  
3 valve housing.

1           20. (Previously Presented) A valve assembly according to claim 1, wherein the total  
2 length of the assembly is less than the length of the female urethra where it is intended to be  
3 inserted.

1           21. (Previously Presented) A valve assembly according to claim 1, wherein the total  
2 length of the valve is less than 60 mm.

1           22. (Previously Presented) A valve assembly according to claim 1, wherein the total  
2 length of the valve assembly is between 5 and 40 mm, preferably 5-30 mm.

1           23. (Previously Presented) A valve assembly according to claim 1, wherein at least a  
2 part of the length of the valve body of said valve assembly has a bending stiffness higher than  
3 0.0004 Nm<sup>2</sup> (Newton square meter).

1           24. (Previously Presented) A valve assembly according to claim 1, wherein at least a  
2 part of the length of the valve body of said valve assembly has a bending stiffness higher than  
3 0.0004 Nm<sup>2</sup> (Newton square meter) and that at least a part of the length of the valve body of said  
4 valve assembly has a bending stiffness lower than 0.05 Nm<sup>2</sup> (Newton square meter).

1           25. (Previously Presented) A valve assembly according to claim 1, wherein the part of  
2 the valve assembly with bending stiffness higher than 0.0004 Nm<sup>2</sup> (Newton square meter) is less  
3 than 80% of the length of the female urethra where it is intended to be inserted.

1           26. (Previously Presented) A valve assembly according to claim 1, wherein the part of  
2 the valve assembly with bending stiffness higher than 0.0004 Nm<sup>2</sup> (Newton square meter) is less  
3 than 50mm.

4           27. (Previously Presented) A valve assembly according to claim 1, wherein the part of  
5 the valve assembly with bending stiffness higher than 0.0004 Nm<sup>2</sup> (Newton square meter) is less  
6 than 40mm.

1           28. (Previously Presented) A valve assembly according to claim 1, wherein the part of  
2 the valve assembly with bending stiffness higher than 0.0004 Nm<sup>2</sup> (Newton square meter) is

3 between 5 and 60 mm.

1 29.(Withdrawn) A valve adapted to be positioned into a urethra and in a valve assembly  
2 according to claim 1, said valve for emptying a patient's urine collected within his bladder,  
3 comprising: a tubular vane housing having an upper, lower, and central part and a channel  
4 therein; a valve body situated at the lower part of the housing a valve seat situated below said  
5 valve body, said central part having at least one drainage hole extending through said tubular  
6 housing, said drainage hole located in the area between the upper end and the valve seat, said  
7 channel of the valve housing in communication with said drainage hole, said valve body being  
8 arranged to be moved in a longitudinal wherein the total length of the valve is less than 60 mm.

1 30.(Withdrawn) A valve adapted to be positioned into a urethra and in a valve assembly  
2 according to claim 1, said valve for emptying a patient's urine collected within his bladder,  
3 comprising: a tubular valve housing having an upper, lower, and central part and a channel  
4 therein; a valve body situated at the lower end of the housing and attached to a valve rod which  
5 in an opposite end thereof comprises a magnet accommodated in the upper portion of the valve;  
6 and a valve seat situated below said valve body, said central part having at least one drainage  
7 hole extending through said tubular housing, said drainage hole located in the area between the  
8 upper part and the valve seat, said channel of the valve housing in communication with said  
9 drainage hole, said valve body being arranged to be moved in a longitudinal direction by means  
10 of a part of the valve rod extending below said valve rod.

1 31.(Withdrawn) A valve according to claim 1,  
2 wherein the valve housing comprises a magnetic controlled valve.

1 32.(Withdrawn) A valve according to claim 1,

2 wherein the valve is electro-magnetically controlled.

1 33. (Previously Presented) A valve according to claim 1,

2 wherein the valve is mechanically controlled.

1 34. (Previously Presented) A valve according to claim 1,

2 wherein the valve is electro-magnetically or mechanically controlled independent of the pressure

3 in the bladder to be emptied.

1 35. (Previously Presented) A valve according to claim 1,

2 wherein the valve may be opened by means of an opening force being between 10 to 200 mN.

1 36. (Previously Presented) A valve according to claim 35, wherein the valve may be

2 opened by means of a opening force being between 20 to 100 mN.

1 37. (Previously Presented) A valve according to claim 30, wherein the valve is partly

2 flexible, and partly rigid, whereby the rigid part is shorter than 50 mm.

1 38. (Previously Presented) A method for emptying a patient's urine bladder, whereby the

2 valve assembly in accordance with claim 1 is inserted in the urethra and influenced at time

3 intervals to open and empty said bladder.